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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LU, ZHIYU

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/824,550	Applicant(s) PECEN ET AL.	
	Examiner Zhiyu Lu	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 23 recites the limitation "the second system". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 7-8 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kallio (US2002/0147008).

Regarding claim 1, Kallio anticipates a method in a wireless communications device, the method comprising:

obtaining a measure of mobility of the wireless communications (paragraphs 0040-0041);

monitoring a first system while selected to a second system only if the measure of mobility exceeds a mobility threshold (paragraph 0048).

Regarding claim 3, Kallio anticipates the limitation of claim 1.

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Kallio also anticipates monitoring the first system includes obtaining a signal measurement from the first system and synchronizing with the first system (paragraphs 0012-0013).

Regarding claim 4, Kallio anticipates the limitation of claim 1.

Kallio also anticipates selecting the first system if a signal measurement of the second system drops below a second system lower threshold (paragraph 0048).

Regarding claim 5, Kallio anticipates the limitation of claim 1.

Kallio also anticipates selecting the first system and deselecting the second system if the signal measurement of the second system drops below a second system lower threshold (paragraph 0048), re-selecting the second system if the signal measurement of the second system exceeds a second system upper threshold for a predetermined time period (a period of four measurement reports, paragraph 0013) after selecting the first system (paragraphs 0047-0048).

Regarding claim 7, Kallio anticipates the limitation of claim 1.

Kallio also anticipates obtaining the measure of mobility based information obtained while selected to the second system (paragraph 0012), on cell selection monitoring the first system while selected to the second system only if the measure of mobility exceeds the mobility threshold (paragraph 0013).

Regarding claim 8, Kallio anticipates the limitation of claim 1.

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Kallio also anticipates the second system is a cellular system, obtaining the measure of mobility based on number of different cells selected while selected to the second system (paragraphs 0012-0013).

Regarding claim 22, Kallio anticipates a method in a wireless communications device, the method comprising:

obtaining a measure of mobility of the wireless communications while selected to a cellular wireless communications system (paragraphs 0040-0041);

monitoring for a broadband wireless communications system while selected to the cellular wireless communications system only if the measure of mobility exceeds a mobility threshold (paragraph 0048).

Regarding claim 23, Kallio anticipates the limitation of claim 22.

Kallio also anticipates obtaining the measure of mobility based on changes in a universe of different cells selected while selected to the second system (paragraph 0039).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 6, 10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US2002/0147008).

Regarding claim 6, Kallio teaches the limitation of claim 5.

Kallio also teaches monitoring the first system after reselecting the second system (paragraphs 0012-0013, 0048).

But, Kallio does not expressly disclose discontinuing monitoring the first system if the measure of mobility is not greater than the mobility threshold.

However, it is obvious that there is no point of monitoring a system that does not provide efficient mobility. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Kallio into discontinuing monitoring, in order to save resources.

Regarding claim 10, Kallio teaches a method in a hybrid wireless communications device, the method comprising:

comparing a mobility measurement of the wireless communications device to a mobility threshold while connected to a broadband wireless network (paragraphs 0012-0013);

monitoring a cellular communications network if the mobility measurement is greater than a mobility threshold (paragraphs 0036-0037).

But, Kallio does not expressly disclose not monitoring the cellular communications network if the mobility measurement is not greater than the mobility threshold.

However, it is obvious that there is no point of monitoring a system that does not provide efficient mobility. Thus, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to modify the method of Kallio into discontinuing monitoring, in order to save resources.

Regarding claim 13, Kallio teaches the limitation of claim 10.

Kallio also teaches selecting the cellular communications network if a signal measurement on the broadband wireless network is less than a lower threshold (paragraphs 0040 and 0048).

Regarding claim 14, Kallio teaches the limitation of claim 13.

Kallio also teaches selecting the broadband wireless network if the signal measurement on the broadband wireless network is greater than or equal to an upper threshold for a specified time period (paragraph 0013), remaining on the cellular communications network if the signal measurement on the broadband wireless network is not greater than or equal to the upper threshold for the specified time period (paragraph 0013).

4. Claims 2, 9, 11, 15 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US2002/0147008) in view of Stoter et al. (US Patent#7092710).

Regarding claims 2 and 11, Kallio teaches the limitations of claims 1 and 10.

But, Kallio does not expressly disclose obtaining the measure of mobility based on a regression error of a signal measurement on the second system.

Stoter et al. teach obtaining the measure of mobility based on a regression error of a signal measurement on the system (column 4 lines 7-21).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate obtaining the measure of mobility based on a regression error of a signal measurement taught by Stoter et al. into the method of Kallio, in order to determine mobility in related to error measurement.

Regarding claim 20, Kallio teaches a method in a wireless communications device operable on first and second wireless communications systems, the method comprising:

- operating on the first wireless communications system (paragraph 0012);

- making signal measurements on the second wireless communications system (paragraph 0012);

- selecting the second wireless communications system if signal measurements on the second wireless communications system exceeds a threshold for a specified time period (paragraph 0013).

But, Kallio does not expressly disclose a dynamic threshold compensates for changes in regression error of the signal measurements on the second wireless communications system.

Stoter et al. teach a dynamic threshold compensates for changes in regression error of the signal measurements on the second wireless communications system (column 4 lines 7-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having a dynamic threshold as taught by Stoter et al. into the method of Kallio, in order to determine mobility in related to error measurement.

Regarding claims 9 and 21, Kallio and Stoter et al. teach the limitations of claims 2 and 20.

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Stoter et al. also teach obtaining the signal measurement based on any one of a received signal strength indication, bit error rate information, and block erasure rate information (column 3 lines 44-48).

Regarding claim 15, Kallio teaches the limitation of claim 11.

But, Kallio does not expressly disclose obtaining the signal measurement based on any one of a received signal strength indication, bit error rate information, and block erasure rate information.

Stoter et al. also teach obtaining the signal measurement based on any one of a received signal strength indication, bit error rate information, and block erasure rate information (column 3 lines 44-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate received signal strength as measurement taught by Stoter et al. into the method of Kallio, in order to determine network efficiency.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US2002/0147008) in view of Stoter et al. (US Patent#7092710) and Riley (US2004/0203880).

Regarding claim 12, Kallio and Stoter et al. teach the limitation of claim 11.

But, Kallio and Stoter et al. do not expressly disclose determining the mobility measurement based on a root mean square of the regression error information.

Riley teaches taking link strength measurement with root mean square process (paragraph 0113).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate root mean square process taught by Riley into the modified method of Kallio and Stoter et al., in order to minimize measurement errors.

6. Claims 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US2002/0147008) in view of Chheda et al. (US2003/0114162).

Regarding claim 16, Kallio teaches a method in a wireless communications device capable of communicating in a cellular communications network and in a broadband wireless network, the method comprising:

determining handover request based on broadband wireless network signal measurement (paragraph 0012);

monitoring a cellular communications network if the signal measurement is lower than a threshold (paragraph 0048);

But, Kallio does not expressly disclose determining regression line error information based on broadband wireless network signal measurement; monitoring a cellular communications network if the error information is greater than a threshold; not monitoring the cellular communications network if the error information is not greater than the threshold.

Chheda et al. teach determining regression line error information based on broadband wireless network signal measurement; monitoring a cellular communications network if the error information is greater than a threshold (paragraph 0024).

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And it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Kallio into discontinuing monitoring saving resources since there is no intention of making a handover to a system without efficient mobility.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate error measurement in handover triggering taught by Chheda et al. into the modified method of Kallio, in order taking poor link quality into triggering handover consideration.

Regarding claim 18, Kallio and Chheda et al. teach the limitation of claim 16.

Kallio also teaches selecting the cellular communications network if a signal measurement on the broadband wireless network is less than a lower threshold (paragraphs 0040 and 0048).

Regarding claim 19, Kallio and Chheda et al. teach the limitation of claim 18.

Kallio also teaches selecting the broadband wireless network if the signal measurement on the broadband wireless network is greater than or equal to an upper threshold for a specified time period (paragraph 0013), remaining on the cellular communications network if the signal measurement on the broadband wireless network is not greater than or equal to the upper threshold for the specified time period (paragraph 0013).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US2002/0147008) in view of Chheda et al. (US2003/0114162) and Riley (US2004/0203880).

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Regarding claim 12, Kallio and Chheda et al. teach the limitation of claim 11.

But, Kallio and Chheda et al. do not expressly disclose determining the mobility measurement based on a root mean square of the regression error information.

Riley teaches taking link strength measurement with root mean square process (paragraph 0113).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate root mean square process taught by Riley into the modified method of Kallio and Chheda et al., in order to minimize measurement errors.


Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vuong Quochien can be reached on (571) 272-7902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu 
August 29, 2006

 9/5/06
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PRIMARY EXAMINER